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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,570

06/16/2005

Steffen Walter

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27387

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04/04/2006

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EXAMINER

GARNER, ONDRIA L

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/511,570

Applicant(s)

WALTER ET AL.

Examiner

Ondria Garner

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20060322</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "21" has been used to designate both additional magnetic flux element and stationary magnetic flux element. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Reference number 111 is not shown in figure 3.

Specification

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.

- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Art Unit: 2834

3. Do not refer to the claim numbers in the specification because the numbers may change.

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being vague and indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term “one of the proceeding claims” is vague and indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 102

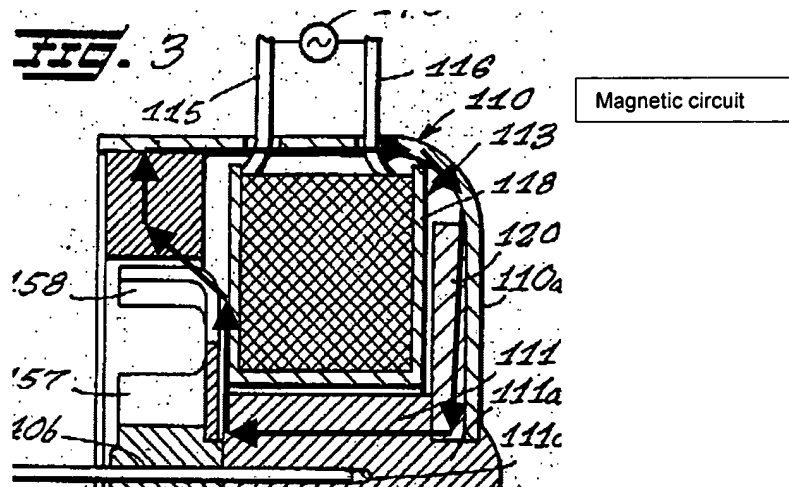
7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2834

8. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Scholten (3356876). Scholten teaches in figure 3 an electromechanical energy converter with a rotor (142), wherein a stationary flat coil (113) is arranged concentrically about the rotation axis (4) of the rotor (142), the region inside the axial projection zone of the inside diameter of the flat coil is defined as a core zone, stationary permanent magnet elements (160) arranged with rotational symmetry and having an alternating pole orientation in axial, radial or axial-radial direction form a magnet ring, magnet flux elements (110) are shaped as toothed elements (151-158), the toothed elements, which are arranged with rotational symmetry and are separated from each other by toothed element gaps, form a soft-magnetic toothed element ring, the number of the toothed elements (151-158) is identical to the number of the pole pairs of the magnet ring (fig. 4), the toothed elements (151-158) and the permanent magnet elements (160) are uniformly distributed along the periphery, the toothed element ring is a component of the rotor (142), at least one annular air gap exists outside the core zone between the magnet ring and the toothed elements (151-158), an annular air gap disposed inside the core zone is arranged axially between the rotor (142) and a stationary magnet flux element (110), and the permanent magnet elements (160), the toothed elements (151-158) as well as additional magnetic flux elements (110) and at least two annular air gaps together form axially-radially oriented magnetic circuits, which extend axially-radially around the flat coil (113) through its coil center and surround the flat coil (113).



Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2, 5, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholten in view of Kuwako et al. (3984709). Scholten discloses all of the features discussed above. Scholten does not disclose the bearing feature. Kuwako discloses a bearing (2,3) function for the rotor 12 in figure 1. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the bearing feature of Kuwako in order to reduce the friction in the motor of Scholten.

11. Referring to claim 5, Scholten discloses all of the features discussed above. Scholten does not disclose two axially superimposed energy converters. Kuwako discloses a common rotor used for two axially superimposed energy converters in figure

Art Unit: 2834

8. It would have been obvious to one of ordinary skill in the art at the time of the invention to have two axially superimposed energy converters of Kuwako to offset the axial force of the converter of Kuwako.

12. Referring to claim 6, Scholten discloses all of the features discussed above. Scholten does not teach the shape of the toothed elements. Kuwako discloses the geometric shape of the toothed elements is designed for defining a preferred rotation direction of the energy converter in figures 2 and 3. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the converter of Scholten to have the shape of Kuwako to make for a stronger and better rotation.

13. Referring to claim 8, Scholten discloses all of the features discussed above. Scholten does not teach the shape of the toothed elements. Kuwako discloses the curved shape of the toothed elements in figures 2 and 3. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teeth of Scholten to be curved like Kuwako to fit in a nonlinear motor.

14. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scholten in view of Kuwako further in view of Shirasaki (5557157). Referring to claim 3, Scholten and Kuwako disclose all of the features discussed above including the stationary soft-magnetic flux element. Neither Scholten nor Kuwako disclose the sliding layer feature. Shirasaki discloses, in figure 1, the sliding layer 6 made from a hard material is disposed between the stationary element 2 having the bearing function and the rotor 15. It would have been obvious to one of ordinary skill in the art at the time of the invention

Art Unit: 2834

to add the sliding feature of Shirasaki to the motor of Scholten or Kuwako in order to provide the converter with more lubrication for more unrestricted movement.

15. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scholten in view of Sawada et al. (6133667). Scholten discloses all of the features discussed above including the flat coil in figure 5 comprising one single plane helical coil (column 4, line 67) but Scholten is silent as to the metal strip feature. Sawada discloses the metal strips as being round and flat in figures 3 and 4. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Scholten and have a metal trip per Sawada because it successful with flat coils.

16. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scholten in view of Holper (3757149). Scholten discloses all of the features discussed above without the additional converter. Holper discloses the additional converter being coupled with a gear in figure 1. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Scholten and use a gear to couple the rotor of an additional electromechanical energy converter to another electromechanical energy converter to have more torque per Holper.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ondria Garner whose telephone number is 571-272-8327. The examiner can normally be reached on Monday through Friday, 8:00 am to 4:30 pm.

Art Unit: 2834

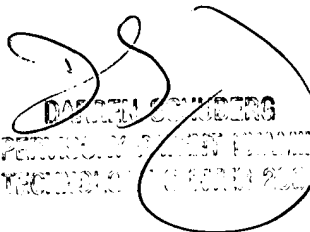
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



OLG

3/22/2006



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